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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,055	12/19/2001	Ali Muhtaroglu	219.40784X00 (ATSK)	9820

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EXAMINER

NGUYEN, JIMMY

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/021,055

Applicant(s)

MUHTAROGLU ET AL.

Examiner

Jimmy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-15,18-22 and 27-39 is/are rejected.
- 7) ☐ Claim(s) 3-5,16,17 and 23-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 6 –11, 13 –15, 18- 20, 30 – 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimada et al (US 5050190).

As to claims 1, 14, Shimada et al disclose (fig 1) an on-die device comprising:  
a control unit (9) to provide differential reference signals; and  
a first detector unit (33) to receive said differential reference signals and to provide a first signal indicative of a differential voltage fluctuation at a first component.

As to claims 2, 6, 7, 15, 18, Shimada et al disclose (fig 1) the device of claim 1, wherein said control unit (9) comprises a voltage generator to receive a first reference voltage signal (25) and a second reference signal (26, this signal receives the power supply from the analog device 15 and 12, column 6 line 60 - 65) from a source external or internal (10) to said die, said voltage generator (9) to provide a control voltage reference signal and further most of the digital control circuit will provide the digital interface.

As to claims 8, 19, Shimada et al disclose (fig 1) differential reference signals comprise differential current signals.

As to claims 9, 20, Shimada et al disclose (fig 1) first detector unit (33) receives a monitored first signal ( $V_{th1}$ ) from said first component on said die and receives a monitored second signal ( $V_{th2}$ ) from said first or the second component on said die.

As to claims 10, 11, Shimada et al disclose (fig 1) first detector unit (33) includes a differential droop sensing mechanism (20, 21) to compare a magnitude of differential fluctuations between said monitored first signal and said monitored second signal with a reference value based on said differential reference signals.

As to claim 13, Shimada et al disclose (fig 1) an on-die device to determine voltage fluctuations, said device to compare differential reference signals and monitored voltage signals at a first area of said die.

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As to claims 30 – 39, In *In re King*, 801 F.2d 1324, 1326 USPQ 136, 138 (Fed. Cir. 1986) it was held that: "Under the principles of Inherency, if a structure in the prior art necessarily functions in accordance with the limitations of a process or method claim of an application, the claim is anticipated." The court added, however, that: "This is not to say that the discovery of a new use for an old structure based on unknown properties of the structure might not be patentable to the discoverer as a process. *In re Hack*, 245 F.2d 246, 248, 114 USPQ 161, 163 (CCPA 1957)."

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 21, 22, 27 - 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al (US 5050190).

As to claims 12 and 21, 22, 27 –29, Shimada et al (US 5050190) discloses a control unit (9) to provide differential reference signals; and a first detector unit (33) to receive said differential reference signals and to provide a first signal indicative of a differential voltage fluctuation at a first

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component. However, the prior arts of record are silent on second detector unit.

However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an additional and identical detector for the purpose of detecting signal from more die since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

***Allowable Subject Matter***

1. Claims 3 – 5, 16, 17, 23 –26, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

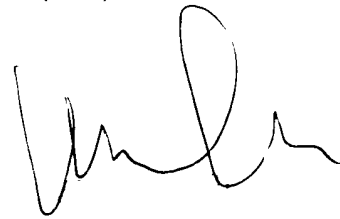
The prior arts of record do not disclose a programmable voltage-to-current converter to receive said control voltage reference signal and to provide said differential reference signals based at least on said control voltage reference signal.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen at (703) 306-5858. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.

JN.  
August 20, 2003

A handwritten signature in black ink, appearing to be 'JN' followed by a stylized flourish.